UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/670,502	09/26/2003	Takayuki Ito	26A-010	8625

23400 7590 11/30/2005

POSZ LAW GROUP, PLC
12040 SOUTH LAKES DRIVE
SUITE 101
RESTON, VA 20191

EXAMINER	
HUSON, MONICA A	

ART UNIT	PAPER NUMBER
1732	

DATE MAILED: 11/30/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/670,502	ITO ET AL.	
	Examiner	Art Unit	
	Monica A. Huson	1732	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *13 September 2005*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-5,11,15-17 and 21-31* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-5,11,15-17 and 21-31* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *26 September 2003* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☒ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date *101105*.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

This office action is in response to the Amendment filed 13 September 2005.

The indicated allowability of claims 10 and 20 is withdrawn in view of the newly discovered reference(s) to Nagasaka. Rejections based on the newly cited reference(s) follow.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1-4, 11, and 15 are rejected under 35 U.S.C. 102(b) as being anticipated by Nagasaka et al. (U.S. Patent 5,628,944). Regarding Claim 1, Nagasaka et al., hereafter "Nagasaka," show that it is known to carry out a method for manufacturing a molded product having a molded portion, wherein the molded product has a surface layer on at least part of its surface (Abstract), the method comprising forming a releasing agent layer on a wall surface of a cavity of a mold by injecting a first liquid containing a releasing agent into the cavity and depressurizing the cavity (Column 7, lines 158-20; Column 7, lines 24-26); forming a surface layer on the wall surface of the cavity by injecting a second liquid containing material of the surface layer into the cavity and depressurizing the cavity (Column 1, lines 55-67; Column 2, lines 6-9; Column 7, lines 32-36); and forming the molded portion by supplying a molding

material into the cavity after the releasing agent layer and the surface layer are formed (Column 3, lines 1-5; Column 48-51).

Regarding Claim 2, Nagasaka shows the process as claimed as discussed in the rejection of Claim 1 above, including a method wherein the depressurization of the cavity is performed after the injection of the releasing agent ends (Column 1, lines 18-23, 55-60).

Regarding Claim 3, Nagasaka shows the process as claimed as discussed in the rejection of Claim 1 above, including a method wherein the releasing agent is injected when depressurizing the cavity (Column 1, lines 55-60; Column 2, lines 4-6; It is noted that when the surface layer contains a releasing agent, the releasing agent is injected when depressurizing the cavity.).

Regarding Claim 4, Nagasaka shows the process as claimed as discussed in the rejection of Claim 1 above, but he does notincluding a method wherein the injection of a first liquid and the depressurizing of the cavity are performed when the mold is closed (Column 1, lines 18-32, 55-67; Column 5, lines 58-67; Column 6, lines 1-9; It is noted that when the surface layer contains a releasing agent, the releasing agent is injected when the mold is closed.).

Regarding Claim 11, Nagasaka shows the process as claimed as discussed in the rejection of Claim 1 above, including a method wherein the molded product is an insert molded product including an insert member occupying at least part of the molded product (Column 1, lines 20-21).

Regarding Claim 15, Nagasaka shows the process as claimed as discussed in the rejection of Claim 1 above, including a method wherein the injection of the first liquid includes injecting a previously measured amount of the first liquid into the cavity (Column 7, lines 32-35).

Claims 21, 22, 24, and 29 are rejected under 35 U.S.C. 102(b) as being anticipated by Bakkelunn (U.S. Patent 4,743,417). Regarding Claim 21, Bakkelunn shows that it is known to carry out a method for manufacturing a molded product having a molded portion (Abstract), the method comprising forming a releasing agent layer on a wall surface of a cavity of a mold by injecting a first liquid containing a releasing agent into the cavity and depressurizing the cavity to a pressure at which the solvent boils (Column 2, lines 4-6, 43-58); and forming the molded portion by supplying a molding material into the cavity after the releasing agent is formed (Column 5, lines 9-15).

Regarding Claim 22, Bakkelunn shows the process as claimed as discussed in the rejection of Claim 21 above, including a method wherein the depressurization of the cavity is performed immediately before the injection of the releasing agent ends or after the injection of the releasing agent ends (Column 2, lines 1-33).

Regarding Claim 24, Bakkelunn shows the process as claimed as discussed in the rejection of Claim 21 above, including a method wherein the injection of a first liquid and the depressurization of the cavity are performed when the mold is closed (Column 4, lines 44-52).

Regarding Claim 29, Bakkelunn shows that it is known to carry out a method for manufacturing a molded product using a mold having a cavity (Abstract), the method comprising the steps of closing the mold (Column 4, lines 44-52); injecting a first liquid including a releasing agent and a solvent that vaporizes under a reduced pressure into the cavity (Column 2, lines 4-6, 43-58); depressurizing the cavity to a pressure at which the solvent vaporizes to form a releasing agent layer on entire surface of the cavity when the mold is closed (Column 2, lines 43-

58); and supplying molding material to the cavity after the releasing agent layer is formed to form the molded product (Column 5, lines 9-15).

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

Claim 16 is rejected under 35 U.S.C. 103(a) as being unpatentable over Nagasaka, in view of Slaats et al. (U.S. Patent 3,910,732). Nagasaka shows that it is known to carry out a method for manufacturing a molded product using a mold having a cavity, wherein the molded product has a surface layer on at least part of its surface (Abstract), the method comprising the steps of forming a releasing agent layer on entire surface of the cavity (Column 1, lines 18-20), forming a surface layer on the wall surface of the cavity by injecting a second liquid containing material of the surface layer into the cavity and depressurizing the cavity (Column 1, lines 55-67; Column 2, lines 6-9; Column 7, lines 32-36); and supplying molding material to the cavity after the releasing agent layer and the surface layer are formed to form the molded product (Column 3, lines 1-5; Column 48-51). Nagasaka does not show forming a release layer when the mold is closed, followed by the injection of a surface layer and body molding material. Slaats shows that it is known to carry out a method wherein a releasing agent layer is formed on the surface of the cavity with the mold is closed (Column 2, lines 11-19, 54-56). Slaats and Nagasaka are combinable because they are concerned with a similar technical field, namely, methods of

molding wherein evacuated molds are used. It would have been prima facie obvious to one of ordinary skill in the art at the time the invention was made to use Slaats' release layer application during Nagasaka's molding process in order to reduce mold cycle time.

Claim 5 is rejected under 35 U.S.C. 103(a) as being unpatentable over Nagasaka, further in view of Bakkelunn.

Regarding Claim 5, Nagasaka shows the process as claimed as discussed in the rejection of Claim 1 above, but he does not show the releasing layer including an agent and a solvent. Bakkelunn shows that it is known to carry out a method wherein the first liquid includes a releasing agent and a solvent, and the cavity is depressurized to a pressure at which the solvent boils (Column 2, lines 4-6, 43-58). It would have been prima facie obvious to one of ordinary skill in the art at the time the invention was made to use Bakkelunn's specific release layer requirements during Nagasaka's molding process in order to insure a flawless demolding sequence.

Claim 17 is rejected under 35 U.S.C. 103(a) as being unpatentable over Nagasaka and Slaats, further in view of Bakkelunn.

Regarding Claim 17, Nagasaka shows the process as claimed as discussed in the rejection of Claim 1 above, but he does not show the releasing layer including an agent and a solvent. Bakkelunn shows that it is known to carry out a method including closing the mold (Column 4, lines 44-52), injecting a first liquid including a releasing agent and a solvent that vaporizes under a reduced pressure into the cavity (Column 2, lines 4-6, 43-58), and the cavity is depressurized to

a pressure at which the solvent boils (Column 2, lines 4-6, 43-58). It would have been prima facie obvious to one of ordinary skill in the art at the time the invention was made to use Bakkelunn's specific release layer requirements during Nagasaka's molding process in order to insure a flawless demolding sequence.

Claims 23, 26-28, 30, and 31 are rejected under 35 U.S.C. 103(a) as being unpatentable over Bakkelunn, in view of Nagasaka.

Regarding Claim 23, Bakkelunn shows the process as claimed as discussed in the rejection of Claim 21 above, but he does not show injecting the releasing layer when depressurizing the cavity. Nagasaka shows that it is known to carry out a method wherein the releasing agent is injected when depressurizing the cavity (Column 1, lines 55-60; Column 2, lines 4-6; It is noted that when the surface layer contains a releasing agent, the releasing agent is injected when depressurizing the cavity.). It would have been prima facie obvious to one of ordinary skill in the art at the time the invention was made to use Nagasaka's release layer molding method during Bakkelunn's process in order to insure a flawless demolding sequence.

Regarding Claim 26, Bakkelunn shows the process as claimed as discussed in the rejection of Claim 21 above, but he does not show specifically molding a surface layer. Nagasaka shows that it is known to carry out a method including forming a surface layer on the wall surface of the cavity by injecting a second liquid containing material of the surface layer into the cavity and depressurizing the cavity (Column 1, lines 55-67; Column 2, lines 6-9; Column 7, lines 32-36). It would have been prima facie obvious to one of ordinary skill in the art at the time the invention was made to use Nagasaka's surface layer molding step during

Bakkelunn's molding process in order to enable the formation of widely-varied decorative objects.

Regarding Claim 27, Bakkelunn shows the process as claimed as discussed in the rejection of Claim 21 above, but he does not show insert molding. Nagasaka shows that it is known to carry out a method wherein the molded product is an insert molded product including an insert member occupying at least part of the molded product (Column 1, lines 20-21). It would have been prima facie obvious to one of ordinary skill in the art at the time the invention was made to use Nagasaka's insert molding process during Bakkelunn's molding process in order to enable the formation of widely-varied decorative objects.

Regarding Claim 28, Bakkelunn shows the process as claimed as discussed in the rejection of Claim 21 above, but he does not specifically show measuring an amount of molding material. Nagasaka shows that it is known to carry out a method wherein the injection of the first liquid includes injecting a previously measured amount of the first liquid into the cavity (Column 7, lines 32-35). It would have been prima facie obvious to one of ordinary skill in the art at the time the invention was made to use Nagasaka's measuring step during Bakkelunn's molding process in order to avoid overfilling or underfilling the mold cavity.

Regarding Claim 30, Bakkelunn shows the process as claimed as discussed in the rejection of Claim 29 above, but he does not specifically show measuring an amount of molding material. Nagasaka shows that it is known to carry out a method wherein the injection of the first liquid includes injecting a previously measured amount of the first liquid into the cavity (Column 7, lines 32-35). It would have been prima facie obvious to one of ordinary skill in the

art at the time the invention was made to use Nagasaka's measuring step during Bakkelunn's molding process in order to avoid overfilling or underfilling the mold cavity.

Regarding Claim 31, Bakkelunn shows the process as claimed as discussed in the rejection of Claim 29 above, but he does not show specifically molding a surface layer. Nagasaka shows that it is known to carry out a method including forming a surface layer on the wall surface of the cavity by injecting a second liquid containing material of the surface layer into the cavity and depressurizing the cavity (Column 1, lines 55-67; Column 2, lines 6-9; Column 7, lines 32-36). It would have been prima facie obvious to one of ordinary skill in the art at the time the invention was made to use Nagasaka's surface layer molding step during Bakkelunn's molding process in order to enable the formation of widely-varied decorative objects.

Claim 25 is rejected under 35 U.S.C. 103(a) as being unpatentable over Bakkelunn, in view of Farber (U.S. Patent 3,768,232). Bakkelunn shows the process as claimed as discussed in the rejection of Claim 21 above, but he does not show recovering the solvent. Farber et al., hereafter "Farber," show that it is known to recover the solvent vaporized in a process (Column 1, lines 33-35) and reuse the recovered solvent as the solvent in a subsequent process (Column 3, lines 16-17). Farber and Bakkelunn are combinable because they are concerned with a similar technical field, namely, processes which involve the vaporization of solvents. It would have been prima facie obvious to one of ordinary skill in the art at the time the invention was made to use Farber's recovery and reuse process during Bakkelunn's molding process in order to reduce operating costs using recycling.

Response to Arguments

Applicant's arguments, see the paper filed 13 September 2005, with respect to the rejection(s) of claim(s) 1 and 5 under Sidles have been fully considered and are persuasive. Therefore, the rejection has been withdrawn. However, upon further consideration, a new ground(s) of rejection is made in view of Bakkelunn.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Monica A. Huson whose telephone number is 571-272-1198. The examiner can normally be reached on Monday-Friday 7:30am-5:00pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Mike Colaianni can be reached on 571-272-1196. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Monica A Huson
November 28, 2005

MICHAEL P. COLAIANNI
SUPERVISORY PATENT EXAMINER